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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,635	07/26/2000	Kevin R. Boyle	PHB 34,367	9407

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EXAMINER

RAMPURIA, SHARAD K

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

14

Office Action Summary

Application No.

09/616,635

Applicant(s)

BOYLE, KEVIN R.

Examiner

Sharad Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/28/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Response to Amendment

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,5,7,9-11,14,17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324), in view of Shiraki.

1. Regarding Claim 1, Houlihan (5,467,324) disclosed A body-worn personal communications apparatus (100; Fig.1; Col.3; 1-12), comprising: a physically-shortened electric antenna (136; Fig.1); a transceiver connected to said physically-shortened electric antenna (Col.3; 16-21); a microphone (132; Fig.1) connected to said transceiver; and a casing, wherein said transceiver is disposed within said casing, (Col.3; 21-40)

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Houlihan (5,467,324) fails to disclosed microphone is mounted on said physically-shortened electric antenna. However, Shiraki teaches in an analogous art, that wherein said physically-shortened electric antenna (10; fig.2) and said microphone (7; fig.3) are mounted on said casing. (2; fig.3) (Col.4; 45 – col.5; 25) wherein microphone (7; fig.3) is mounted on said physically-shortened electric antenna (10; fig.2) (Col.4; 45 – col.5; 25) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include microphone is mounted on said physically-shortened electric antenna in order to improve miniaturization.

2. Regarding Claim 2, Houlihan (5,467,324) disclosed all the particulars of the claim except a helical antenna. However, Shiraki teaches in an analogous art, that The apparatus of claim 1, wherein said physically shortened electric antenna is a helical antenna. (Col.4; 53–61) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a helical antenna in order to minimize the space required for the antenna.

5. Regarding Claim 5, Houlihan (5,467,324) disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Shiraki teaches in an analogous art, that The apparatus of claim 1, wherein said microphone (7; fig.3) is located at an end of said physically-shortened electric antenna (8; fig.3) furthest from said casing. (2) (col.5; 12-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

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7. Regarding Claim 7, Houlihan (5,467,324) disclosed The apparatus of claim 5, wherein said physically-shortened electric antenna is formed from a hollow wire, wherein a first electrical connection between said microphone and said transceiver is provided by said hollow wire, and wherein a second electrical connection between said microphone and said transceiver is provided by a conductor enclosed by said hollow wire. (Col.3; 41-51).

9. Regarding Claim 9, Houlihan (5,467,324) disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Shiraki teaches in an analogous art, that The apparatus of claim 5, wherein said microphone (7; fig.3) provides a top loading to said physically-shortened electric antenna. (8; fig.3) (col.5; 12-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

10. Regarding Claim 10, Houlihan (5,467,324) disclosed A body-worn personal communications apparatus (100; Fig.1; Col.3; 1-12), comprising: a casing; a physically-shortened electric antenna mounted on said casing; (Col.3; 21-40)

Houlihan (5,467,324) fails to disclosed microphone is mounted on said physically-shortened electric antenna. However, Shiraki teaches in an analogous art, that wherein said physically-shortened electric antenna (10; fig.2) and said microphone (7; fig.3) are mounted on said casing. (2; fig.3) (Col.4; 45 – col.5; 25)

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wherein microphone (7; fig.3) is mounted on said physically-shortened electric antenna (10; fig.2) (Col.4; 45 – col.5; 25) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include microphone is mounted on said physically-shortened electric antenna in order to improve miniaturization.

11. Regarding Claim 11, Houlihan (5,467,324) disclosed all the particulars of the claim except a helical antenna. However, Shiraki teaches in an analogous art, that The apparatus of claim 10, wherein said physically shortened electric antenna is a helical antenna. (Col.4; 53–61) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a helical antenna in order to minimize the space required for the antenna.

14. Regarding Claim 14, Houlihan (5,467,324) disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Shiraki teaches in an analogous art, that The apparatus of claim 10, wherein said microphone (7; fig.3) is located at an end of said physically-shortened electric antenna (8; fig.3) furthest from said casing. (2) (col.5; 12-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

17. Regarding Claim 17, Houlihan (5,467,324) disclosed The apparatus of claim 10, wherein said physically-shortened electric antenna is formed from a hollow wire, wherein a first electrical connection between said microphone and said transceiver is provided by said hollow wire, and wherein a second electrical connection between said

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microphone and said transceiver is provided by a conductor enclosed by said hollow wire. (Col.3; 41-51).

18. Regarding Claim 18, Houlihan (5,467,324) disclosed all the particulars of the claim except the microphone is located at the end of the antenna furthest from the casing. However, Shiraki teaches in an analogous art, that The apparatus of claim 10, wherein said microphone (7; fig.3) provides a top loading to said physically-shortened electric antenna. (8; fig.3) (col.5; 12-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a microphone mounted on said physically-shortened electric antenna in order to obtain the good communication channel quality.

Claims 3, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) & Shiraki, in view of Hirai et al.

3. Regarding Claim 3, The above combination disclosed all the particulars of the claim except a meander-line antenna. However, Hirai teaches in an analogous art, that The apparatus of claim 1, wherein said physically shortened electric antenna is a meander-line antenna. (16; Fig.1; Col.3; 11-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a meander-line antenna in order to minimize the space required for the antenna.

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12. Regarding Claim 12, The above combination disclosed all the particulars of the claim except a meander-line antenna. However, Hirai teaches in an analogous art, that The apparatus of claim 10, wherein said physically shortened electric antenna is a meander-line antenna. (16; Fig.1; Col.3; 11-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a meander-line antenna in order to minimize the space required for the antenna.

Claims 4, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) & Shiraki in view of Barnard (WO 00/13329).

4. Regarding Claim 4, The above combination disclosed all the particulars of the claim except the antenna is mounted transversely to a plane through the casing. However, Barnard teaches in an analogous art, that The apparatus of claim 1, wherein said physically-shortened electric antenna is mounted transversely to a plane through said casing. (in the casing; Col.5; 22-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the antenna is mounted transversely to a plane through the casing in order to provide a low bandwidth.

13. Regarding Claim 13, The above combination disclosed all the particulars of the claim except the antenna is mounted transversely to a plane through the casing. However, Barnard teaches in an analogous art, that The apparatus of claim 10, wherein said physically-shortened electric antenna is mounted transversely to a plane through said casing. (in the casing; Col.5; 22-28). Therefore, it would have been obvious to one

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of ordinary skill in the art at the time of invention to include the antenna is mounted transversely to a plane through the casing in order to provide a low bandwidth.

Claims 6, 8, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (5,467,324) & Shiraki, in view of McLean (GB 2036447).

6. Regarding Claim 6, The above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 5, wherein said physically shortened electric antenna is formed from a coaxial cable that provides electrical connections between said microphone and said transceiver. (Page.2; 45-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

8. Regarding Claim 8, The above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 6, wherein said microphone provides a low impedance at radio frequencies to thereby enable said coaxial cable forming said physically-shortened electric antenna to act as an inductive stub. (Page.2; 45-64) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

15. Regarding Claim 15, The above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The

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apparatus of claim 10, further comprising: a transceiver, wherein said physically-shortened electric antenna is formed from a coaxial cable that provides electrical connections between said microphone and said transceiver. (Page.2; 45-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

16. Regarding Claim 16, The above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 15, wherein said microphone provides a low impedance at radio frequencies to thereby enable said coaxial cable forming said physically-shortened electric antenna to act as an inductive stub. (Page.2; 45-59) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include the coaxial cable in order to use the thickness of cable.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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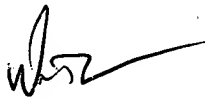
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Thu. (6:30-4:00) alternate Fri. (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Sharad k. Rampuria
September 26, 2003


WILLIAM TROST
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